Drinking Water Cross-Connection Control Programs

Idaho Department of Environmental Quality

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Complete Requirements

The Idaho Rules for Public Drinking Water Systems contain the full text and complete requirements for cross-connection control programs.

Backflow Assembly Tester Licensing

Individuals must be licensed by the Idaho Bureau of Occupational Licenses as backflow assembly testers in order to inspect and test backflow prevention assemblies.

For More Information

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What is a Cross-Connection?

An actual or potential connection or piping arrangement between a drinking water system and another source that could introduce anything other than the water intended to normally supply the system.

Cross-connections include bypass arrangements, jumper connections, removable sections, swivel or changeover devices, and other devices that may cause backflow. Backflow occurs when the normal flow direction of the water system is reversed due to back pressure or back siphonage.

Responsibilities of Water Purveyors

Water purveyors must take reasonable and prudent measures to protect their water systems against contamination and pollution from cross-connections. Methods include:

- fixture protection,
- premise isolation,
- internal (or in-plant) isolation, or
- some combination of the three above methods.

Community Water Systems

Community water system purveyors must implement and enforce a cross-connection control program to prevent toxic or hazardous materials from entering the system. Programs must include at least the following:

- All facilities are inspected to locate cross-connections and determine required suitable protection.
- Suitable protection is installed before providing water service for new connections.
- Adequate backflow prevention assemblies are installated and operating, and inspected and tested annually by a tester licensed by the Idaho Bureau of Occupational Licenses.
- Service is stopped for any facility where suitable backflow protection has not been provided for a cross-connection.

Non-Community Water Systems

Non-community water system purveyors must make sure that cross-connections either do not exist or are isolated from the water system by an appropriate backflow preventer.

Backflow Prevention Assemblies and Devices

A *backflow prevention assembly* is a set of mechanical components that prevents the undesired backflow of water or other liquids into a drinking water system and can be tested and repaired in-line. A *backflow prevention device* is a backflow preventer that does not meet the approval requirements of a backflow prevention assembly.

Some types of backflow prevention *assemblies* include the following:

- double check valve assemblies
- reduced pressure principle backflow assemblies
- spill resistant vacuum breaker assemblies
- pressure vacuum breaker assemblies

The assembly types must pass a performance test conducted by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. In addition, all double check valve and reduced pressure principle backflow assemblies used must meet American Water Works Association (AWWA) Standards C-510 or C-511.

Some types of backflow prevention *devices* include atmospheric vacuum breakers, hose bibb vacuum breakers, and dual checks with atmospheric vent. Atmospheric vacuum breakers must be approved by either the International Association of Plumbing and Mechanical Officials (IAPMO) or the American Society of Sanitation Engineers (ASSE).

Before installing backflow preventers, water purveyors must make sure they are selected from an appropriate reference material deemed acceptable by the Idaho Department of Environmental Quality. (See the Idaho Rules for Public Drinking Water Systems, section 58.01.08.552.06.b.) The installation of any assembly must also comply with local ordinances.

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